

ON AUSTRALIAN COLEOPTERA.

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PART I.

Plate ix.

THE Coleoptera of Australia have been comparatively well-worked only in the Families or Groups consisting mainly of large, showy, or otherwise attractive species; about 15,000 species have been named, a number probably far short of what may be obtained in the coastal districts of Queensland alone. The work of Macleay and King, followed later by Blackburn and Olliff, with the more or less rapidly-accumulating specimens in the various State Museums and private collections, have enabled local workers to deal with them at a steadily accelerating rate. The South Australian Museum has been especially fortunate; by the acquisition of the collection of the late Rev. T. Blackburn, authentically-named specimens of thousands of species, including cotypes, were obtained; and more recently the Museum acquired the collection of Mr. Augustus Simson; this is especially rich in specimens from Tasmania and Queensland. By its acquisition also the Museum obtained the types of a number of species, as follows:

STAPHYLINIDÆ.

Alcochara bahiola Oll.
Calodera atypha Oll.
Calodera simsoni Oll.
Homalota indefessa Oll.
Mctoponcus encrevus Oll.
Pelioptera astuta Oll.
Polylobus tasmanicus Oll.

MALACODERMIDÆ.

Heteromastix discoflavus Lea.
Metriorrhynchus simsoni Lea.

CURCULIONIDÆ.

Exithius ferrugineus Lea.
Imaliodes frater Lea.
Myrtesis nasuta Lea.
Myrtesis pullata Lea.
Perissops intricatus Lea.
Poropterus simsoni Lea (*nodosus*
Lea, n.pr.).
Pseudometyrus vicarius Lea.

CHIRYSOMELIDÆ.

Cryptocephalus sobrinus Lea

The following pages deal mostly with specimens in the South Australian Museum.

Family STAPHYLINIDÆ.

TRIPLECTENOPUS gen. nov.

Head rather large, ovate, with a very narrow neck. *Eyes* absent. *Mandibles* strong. *Maxillary palpi* with two apical joints rather long and subequal;

labial palpi small, supported by a narrow produced portion of mentum. Antennae rather long, most of the joints moniliform. *Prothorax* rather elongate, very narrow in front, truncate at base. *Scutellum* very small. *Elytra* small, depressed, sides finely serrated. *Abdomen* with five strongly margined segments on upper surface, a sixth feebly margined, and a small immarginate seventh. *Legs* rather long; front tibiae near middle with a strong notch, at edge of and behind the notch with three combs; tarsi thin, fourth joint lightly produced under base of fifth. *Apterous*.

The genus should be placed next to *Domene* in catalogues; at first glance the remarkable insect named below appears like an exaggeration of *D. torrensensis*, but the complete absence of eyes is at once distinctive. There is a shining rounded knob close to the base of each antenna, that at first glance appears like a non-faceted eye, and a similar knob is near each antenna of *D. torrensensis*, but on that species there is a coarsely faceted eye on the side behind each antenna; on *T. caecus* a feeble oblique ridge is placed behind each knob, and on the left side of the type, at the end of the ridge, there is a feeble elevation (with a few punctures) that from some directions looks like a very small eye, but on the right side this appearance is wanting, and I have satisfied myself, after repeated examinations from many angles, that eyes are really absent. There are three combs on each side of the front tibiae, but to see these clearly a compound power is required: one margins the edge of the notch, the others being almost parallel with it; the teeth consist of closely placed setae, and in certain lights have a golden appearance; under a hand lens they are hardly more than indicated; apparently somewhat similar combs are present on the front tibiae of *D. torrensensis*. The mandibles are clenched on the type, but so far as they are visible they appear to be nondentate.

TRIPECTENOPUS CAECUS sp. nov.

Plate ix, fig. 1.

Flavous; antennae somewhat darker; mandibles still darker. Clothed with fine and rather sparse pubescence, a few hairs scattered about, becoming rather numerous on mouth parts, and dense on apex of abdomen.

Head slightly longer than wide, sides and base strongly rounded, with a short and narrow neck, scarcely thicker than basal joint of antennae, with a round, highly-polished elevation near base of each antenna, on each side in front a small projection overhanging the clypeus; with sharply-defined but rather small, irregularly-distributed punctures. Clypeus very short. Labrum moderately long and bilobed in front. Antennae extending almost to base of prothorax, first joint cylindrical slightly shorter than second and third combined,

third slightly longer than second or fourth, eleventh obtusely pointed. *Prothorax* slightly longer than wide, widest across apical third, thence rapidly narrowed to apex, median line conspicuous; with rather dense, small punctures. *Elytra* narrower and shorter than prothorax, sides finely serrated; with fairly dense, and rather large, asperate punctures. *Abdomen* dilated from base to beyond the middle of fifth segment, and thence strongly narrowed to apex; on both surfaces with rather dense, but not very large, asperate punctures. Front *coxae* separated by a strongly elevated narrow keel, the others touching; front femora lightly dentate, the others edentate. Length, 7.75, to apex of elytra, 4.75 mm.

Hab. Queensland: Pine Mountain. Type (unique), K.21540, in Australian Museum.

The only blind beetle previously recorded from Queensland is *Typhluloma inops* of the *Tenebrionidae*.

Family HISTERIDAE.

CHLAMYDOPSIS FORMICICOLA King, var. DARWINENSIS

var. nov.

A specimen from Darwin is structurally so close to some cotypes of *C. formicicola* that I cannot regard it as representing more than a variety of that species; but it differs in several respects; on the cotypes the striation of the vertical side of each elytron is everywhere strong, and is conspicuously directed towards the opening behind the epaulette; on the Darwin specimen the striation is much less strong, and above and just below the opening is altogether absent, or traceable with difficulty, the inner discal ridge on each elytron is acute, and at its apex, still as a distinct narrow ridge, it curves round and abruptly terminates half-way to the outer ridge, and about one-third from the apex; on the cotypes the inner discal ridge is much less acute posteriorly, and at its apex is obtusely connected with a wide feeble elevation; the punctures on the prosternum are also less conspicuous than on the cotypes.

CHLAMYDOPSIS ECTATOMMAE Lea.

Plate ix, fig. 2.

Mr. W. du Boulay has recently taken, in nests of *Ectotomma metallicum* near Sydney, two specimens of this species, but they differ from the type in being paler, dark castaneous-brown with the elytra and legs paler, and one of them has the serrations at the apex of the prothorax more pronounced (pl. ix, fig. 2). The antennae on both are closely fitted into cavities in the head, all parts but the outer portion of the first joint being concealed. At the side of each antenna (the corner of the head and prothorax) there is a depression allowing a small

part of the eye to be seen, behind the side of each depression the margin of the prothorax is rather thin, and, although not really tuberculate, appears as a very conspicuous and rather acute process when viewed from behind.

CHLAMYDOPSIS PALLIDA sp. nov.

Pale castaneous, almost flavous. Head, pronotum and prosternum with a few pale setae.

Head finely reticulate. Antennae with basal joint large, irregularly triangular, and in front with sculpture as on face; intermediate joints thin and closely applied; club large, subcylindrical, and moderately curved. *Prothorax* almost twice as wide as long, sides narrowly elevated and somewhat oblique, front gently bilobed in middle, gently undulating to each side and notched at each end, disc convex, depressed towards each side and conspicuously concave at each front angle; reticulation as on head. *Elytra* slightly wider than long, base with a wide transverse excavation, closed at each side, and with a slightly elevated, setose, transverse ridge near its base; behind the excavation and on the sides with rather numerous but feeble striae. *Prosternum* reticulate on middle portion; metasternum and abdomen shining, and each with a row of small punctures at base; propygidium slightly reticulate; pygidium smooth. *Legs* moderately long; front tibiae, for the genus, not very wide, the others considerably wider, obliquely increasing from base to middle, and then gently rounded to apex. Length, 2 mm.

Hab. New South Wales: Sydney (W. du Boulay). Type, 1,9302.

Somewhat resembles *C. chipleuralis* on a small scale, but the epaulettes are very different; the prothorax is more conspicuously reticulate, the elytra are glabrous, with their striation finer, and tibiae not angulate about the middle (although the four hind ones are conspicuously inflated). From one antenna of the type the club is missing, the other club from behind appears to be solid, but in front the obscure sutures are invisible. The epaulettes are curved, shining, and each is in one piece, without a hole perforating it from side to side, there is a shallow depression representing the perforation of other species, but the space about the depression is shining, and without striae converging towards it; the epaulettes are also without conspicuous clothing, but within each there appears to be a very short membrane. Mr. du Boulay obtained three specimens from nests of a small reddish ant; Mr. E. H. Zeck has also taken a specimen from a nest of the same kind of ant, which he states is *Meranoplus hirsutus*.

Family BYRRHIDAE.

CHELONARIUM Fabr.

Syst. Fl. i; 1801, p. 101. Lacord. Gen. des. Coleopt., ii, p. 488. Leconte, Class. Col. N. Amer., i, p. 112. Sharp, Biol. Centr. Amer., Col. ii, part i, p. 684.

A beetle recently received from Mr. H. W. Brown proves to be a member of this remarkable genus, hitherto unknown from Australia, and whose headquarters are central America and Brazil. It is characterized by having the head entirely concealed from above, and fitting into a cavity in the prosternum; eyes large, smooth, and with facets so small that they are scarcely visible; antennae approximate at the base, inserted almost at the tip of the head, and produced forward, with the three basal joints fitting into a notch in the mesosternum, the notch very similar to that of many *Elateridae*; all the legs received into cavities, each tibia fitting into a femur, and each tarsus into a tibia; of the tarsal joints the third is conspicuously produced below, and quite concealing, the small fourth, and the claws are strongly appendiculate. The genus constitutes the subfamily *Chelonariidae*, generally regarded as somewhat dubiously placed in the *Byrrhidae*. At first glance the species described below has a vague resemblance to some of the cryptocephalous *Anobiidae*.

CHELONARIUM AUSTRALICUM sp. nov.

Plate i, fig. 3.

Dark brown, in places almost black, parts of appendages paler. Rather lightly clothed with pale depressed setae, in places forming loosely compacted spots; under-surface with shorter, denser, slightly darker, and more uniform clothing.

Head with crowded and moderately large punctures. Eyes separated rather more than their own width from each other. Antennae with first joint concealed except at the sides, second moderately long and about half the length of third. *Prothorax* almost semicircular, margins gently elevated and undulating, base finely denticulate; punctures much less crowded than on head, but similar in size. *Scutellum* moderately large. *Elytra* with outlines subcontinuous with those of prothorax; with rather small, shallow punctures, less numerous than on prothorax. *Prosternum* about thrice the width of head, and with very similar punctures; mesosternum with intercoxal notch triangular; episterna normally concealed; metasternal episterna rather short, epimera small and triangular; elytral epipleurae very conspicuous at sides of metasternum, very narrow thence to apex. *Abdomen* convex; with small, crowded punctures, sparser in middle of base than elsewhere. Length, 7 mm.

Hab. Queensland: South Johnstone River (H. W. Brown). Type (unique), 19301.

In general appearance like *C. undatum* (from Brazil), and with base of prothorax similarly denticulate, but considerably larger, eyes more widely separated, head more distant from front of prosternum, and punctures and

clothing somewhat different. The type has both antennae damaged, but the three basal joints of each are exactly as on *undatum*. It is a somewhat shining species. From some directions each elytral puncture appears to be in the centre of a small square, but from most directions only the punctures themselves are distinct.

Family LUCANIDAE.

LISSOTES KERSHAWI sp. nov.

Plate ix, figs. 4 and 5.

Male. Black, shining. Sides, under-surface and legs more or less sparsely clothed.

Head excavated in front, a conspicuous semi-double projection on forehead overhanging the excavation; punctures large and round, smaller in middle than elsewhere, becoming confluent on sides. Mandibles strongly curved and simple in front, towards base with a large cuspidate mass. Labrum small, subtriangular and subvertical. Antennae with seventh joint slightly wider than sixth, but of the same shape, the three following considerably wider, tenth widely rounded at apex. *Prothorax* almost twice as wide as long, sides feebly serrated, basal angles rounded off, with a wide and shallow depression along middle; with round and sharply-defined punctures, somewhat irregularly distributed. *Scutellum* very short. *Elytra* slightly narrower than prothorax, each shoulder with a small subdentiform elevation; with fairly large punctures near suture, becoming smaller and crowded about sides and apex; with a few irregularly distributed scratches, and with a few feeble elevations on which the punctures are sparser than on the adjacent surface. Front *tibiae* with from six to thirteen teeth, of which two are large and from three to five moderately large. Length, 14-16 mm.

Female. Differs in having the head smaller, with denser punctures, without a median excavation or projection, mandibles much smaller and otherwise different; prothorax smaller, sides more conspicuously serrated and narrower across apex, and with more crowded punctures.

Hab. Victoria: National Park in Wilson's Promontory, December-January, 1913-1914 (J. A. Kershaw). Types in National Museum; cotype, I.8506, in South Australian Museum.

The mandibles of the male, although differing in detail, are nearer to those of the Tasmanian *curvicornis* than to those of any other species known to me, but in other respects the species is strikingly different from that one, and the conspicuous projection on the forehead, somewhat suggestive of that on the forehead of the much larger and otherwise different *Lissapterus howittanus*, will readily distinguish it from all other described species of the genus. The mandi-

bles of the male are of such a shape that their tips can never touch, owing to the cuspidate basal masses; the cusps (or obtuse serrations) vary, on the three males before me they are respectively seven and five, five and six, and four and five. The canthus in front of each eye is moderately prominent, but the head behind each eye is gently rounded. The mandibles of the female are of the usual feminine type, having a ridge on the upper surface, and an acute inner projection about the middle.

Family CERAMBYCIDAE.

BETHELIUM Pasc.

Journ. Linn. Soc., ix, 1866, p. 97. (Type, *signiferum* Newm.)

Ectosticta Pasc., l.c., p. 104. (Type, *cleroides* White.)

Ipomoria Pasc., l.c., p. 105. (Type, *tillides* Pasc.)

Paseoe proposed two of these names on trivial grounds, and I consider that neither *Ectosticta* nor *Ipomoria* are required; the slight differences in size of the facets of the eyes (the eyes of *B. signiferum* and of *B. cleroides* differ somewhat in size, but the facets themselves scarcely differ), and the proportionate lengths of the first and third joints of the antennae are not sufficient to warrant the generic separation of species so obviously allied. The synonymy is now somewhat complicated but, referring all the species to *Bethelium*, appears to be as follows:

cleroides White (*Callidium* White; *Ectosticta* Pasc.),

var. *blackburni* Gahan.

var. *cburatum* Pasc. (*Callidium* Pasc.),

var. *mundum* Blackb.

var. *simillimum* White (*Callidium* White),

var. *tricolor* Blackb.

inscriptum Pasc. (*Callidium* Pasc.),

ornatum Blackb. (*Ectosticta* Blackb.),

ruidum Pasc. (*Ectosticta* Pasc.),

puncticolle Pasc.

signiferum Newm. (near *Callidium* Newm.),

diversicorne White (*Callidium* White; *Ceratophorus* G. and H.),

flavomaculatum Blanch. (*Callidium* Blanch.),

fuscomaculatum H. and J.

personatus Er. (*Phacodes* Er.),

spinicorne Blackb.

tillides Pasc. (*Ipomoria* Pasc.),

BETHELIUM SIGNIFERUM Newm.

This species varies considerably in size (5.5-9 mm.), and in the intensity and extent of its markings. It occurs in Queensland, New South Wales, Victoria, and South Australia, as well as in Tasmania.

var. PICTIPENNE var. nov.

Numerous specimens from Queensland (Coen River and Cairns), and New South Wales (Tweed River and Dorrigo), in structure agree so well with *B. signifera* that I cannot regard them as representing more than a variety; but they differ from normal specimens in being considerably paler, with the dark elytral markings narrower and less extended; on the elytra there appears to be a narrow and somewhat irregular X, but near the upper edge of each side of the X there is usually a short spur, directed towards, but not reaching, the basal incurvature (on the typical form of *signifera* this spur is always present and more extended), there is also at about one-fourth from the apex a narrow fascia somewhat obliquely placed on each elytron, and not joined to the X along the suture, on some specimens, however, it almost joins the X; on two specimens the X only is present, and on one specimen only the posterior half of the X. There are usually three disconnected spots on the pronotum, but sometimes the two front ones are connected with a short apical infuscation, and the hind one with a basal infuscation; on one specimen the three spots are almost connected. There is usually a dark spot between the eyes.

BETHELIUM CLEROIDES White.

var. *churatum* Pasc. var. *blackburni* Gahan. var. *mundum* Blackb. var. *tricolor* Blackb.

The colour of the prothorax of this species varies from reddish, with or without a slight infuscation at the base and apex, to entirely dark; the ground colour of the basal two-thirds of the elytra also varies from red to almost black, and the antemedian fascia varies in width and completeness. There is nothing in the description of *Ectosticta churata* inconsistent with its having been drawn up from one of the many slight varietal forms of the species. A cotype of *B. tricolor*, which agrees well with the description (1), also belongs to that species; and *B. mundum* must also be referred to it, the small size, and narrow antemedian fascia, being quite common variations. The description of *B. blackburni* seems also to have been drawn up from a dark Tasmanian form of the

(1) This note was partly drafted before I had seen Gahan's reference of *B. tricolor* to *B. simillimum*, one of the named varieties of *B. cleroides*.

species. The species occurs in New South Wales, Victoria, Tasmania, and South Australia.

BETHELIUM RUIDUM Pasc.

B. puncticolle Pasc.

This species varies in length from 4.5 to 9 mm., and the prothorax from a dull red to dark brown. It occurs in South Australia (Port Lincoln and Lucindale), as well as in Western Australia (Warren River, Geraldton, and Yilgarn). It was referred to *Ectosticta*, but I am convinced that the description was founded upon a large female of the same species, that was later described from a small male, under the name of *Bethelium puncticolle*.

BETHELIUM ORNATUM Blackb.

The prothoracic punctures and the general sculpture of *B. ornatum* and its varieties are much as on *B. ruidum*; but the latter species has strong punctures on the apical portion of the elytra.

var. METALLICUM var. nov.

Some specimens from Sydney (H. J. Carter), Gosford (J. J. Walker), and Blue Mountains (G. Masters), are structurally too close to *B. ornatum* to be regarded as belonging to a distinct species; but they differ considerably in colour: the portion of the elytra, except the shoulders, in front of the abbreviated white antemedial fascia, is entirely metallic-purple; on nine specimens of the typical form the white postmedian fascia is sharply limited, but on five of the six specimens of the variety it is less sharply limited, with the part behind it less dark than on the typical form; the prothorax also is more conspicuously metallic-blue.

var. RUFICOLLE var. nov.

Sixteen specimens from Lucindale (B. A. Feuerherdt) are also too close to *B. ornatum* to be regarded as distinct, but they differ in having the prothorax entirely red.

BETHELIUM TILLIDES Pasc.

The general colour of this species is usually black or blackish, but occasionally the prothorax is of a dull reddish-castaneous; the first elytral fascia was described by Pascoe as "widely interrupted at the suture," this it occasionally is, but on most specimens as the fascia approaches the suture on each elytron it is abruptly narrowed and deflected obliquely backwards, the hind part sometimes being quite isolated from the front part, more or less rounded, and almost touching the suture.

BETHELIUM SUPOPACUM sp. nov.

Of a rusty castaneous and subopaque, some parts darker, elytra with flavous markings. Clothed with very short, inconspicuous pubescence, and in addition with numerous moderately long, suberect hairs.

Head with small, crowded, asperate punctures. Antennae moderately long, first joint almost as long as second and third combined, third slightly longer than fourth, and much shorter than fifth, the longest of all, the others gradually decreasing in length. *Prothorax* rather flat, sides rather strongly and almost evenly rounded, base narrowed and with a transverse impression, median line feeble; with dense punctures as on head, and with numerous small granules, each with a setiferous puncture. *Elytra* flat, at base slightly wider than widest part of prothorax, almost parallel-sided to near apex; surface shagreened and with numerous small punctures, becoming larger, denser, and asperate about base, in addition with setiferous granules as on pronotum. *Legs* moderately long; femora stout, hind pair not extending to apex of elytra; tibiae almost straight. Length, 5-7 mm.

Hab. Queensland: Cairns district (E. Allen and A. M. Lea). Type, L9316.

Structurally close to *B. signiferum*, but elytral punctures and markings very different, middle tibiae straight, eyes somewhat larger and less deeply notched, and fourth joint of antennae somewhat longer. The darker parts are not sharply defined, and are the sides of the prothorax, and the parts adjacent to the sub-basal elytral spots; the under-surface and legs, the femora sometimes dark in the middle, are rather pale; the spots on each elytron are two subconjoined, occasionally quite conjoined, ovate ones, at about the basal third (the outer one somewhat in advance of the inner), and a rather large spot of irregular size, occasionally appearing as two subconjoined ones, at about the apical third; on some specimens in addition the shoulder and a space near the scutellum are paler than the adjacent surface. The median line of the pronotum is very feebly impressed, and is usually impunctate; the setiferous granules on the elytra are seen to be in quite regular rows when viewed from behind, but from above seem rather irregularly distributed.

BEBIUS CYLINDRICUS sp. nov.

Plate ix, fig. 6.

Of a dingy rusty-brown, some parts almost black. Lightly clothed with short, depressed, white pubescence, denser on scutellum, metasternum, and abdomen than elsewhere.

Head small; with rather coarse, crowded punctures; median line distinct on basal half. Eyes large, very coarsely faceted, rather deeply notched. Antennae

thin, scarcely extending to middle of elytra, first joint as long as second and third combined, third slightly longer than fifth, and distinctly longer than fourth, the others subequal, but eleventh longer than tenth. *Prothorax* cylindrical, more than thrice as long as wide; with dense and small non-confluent punctures; with a feeble median line. *Scutellum* small. *Elytra* very little wider than prothorax, parallel-sided almost to apex, where each is obliquely truncated; with crowded large and, in places, subconfluent punctures about base, becoming smaller, but still fairly large, posteriorly. *Legs* short; claw joint unusually long. Length, 12.5-14 mm.

Hab. South Australia: Adelaide (Miss A. Adcock and A. H. Elston). Type, L9317.

The most cylindrical longicorn that I have seen. Seen from the side the long prothorax (with front legs set at the extreme base) has a very peculiar appearance. From *B. filiformis* it is distinguished by the longer and more cylindrical prothorax, with very dense small punctures, much smaller than on any part of the elytra, the eyes larger, closer together, and with much coarser facets, and by the much longer claw joint. From the description of *B. variegatus* it differs in many respects. Of the two specimens in the Museum the larger is the darker, having the head prothorax and femora black or almost so; on the smaller specimen the head only is black; the larger specimen also has the suture and sides of elytra somewhat paler than the discal portions.

BEBIUS FILIFORMIS Pasc.

This species varies in length from 7.5 to 11 mm.; and occurs in New South Wales, Victoria, and Western Australia, as well as in South Australia.

OCHYRA VARIABILIS sp. nov.

Colours variable. Upper-surface with short indistinct pubescence, but several distinct patches of white pubescence on under-surface; with a few long, straggling, erect hairs on prothorax, elytra and legs.

Head with dense, but sharply-defined, non-confluent punctures. Eyes deeply notched. Antennae moderately long, first joint stout, as long as second and third combined, fourth as long as fifth, but slightly shorter than third, the others gradually decreasing in length, but eleventh distinctly longer than tenth. *Prothorax* strongly convex, sides strongly rounded and each with a short acute projection; punctures as on head. *Elytra* much wider than prothorax, sides gently incurved to middle; surface shagreened and with indistinct punctures, but polished space with a few distinct punctures. *Legs* rather short and stout. Length, 4.5 mm.

Hab. Western Australia: Warren River (W. D. Dodd), Swan River and Karridale (A. M. Lea). Type, 19313.

Allied to *O. nana*, but pale elytral fascia not elevated, and punctures of pronotum round instead of longitudinal. The type is black and subopaque, but with a highly-polished space on the elytra before the middle, across the middle itself there is a fairly wide whitish fascia, touching the sides, but narrowly interrupted at the suture; the legs and the basal joint of the antennae are of a dingy brown, the rest of the antennae and the tarsi somewhat paler. A second specimen differs from the type only by having the median fascia not quite touching the sides, and with the sutural interruption more pronounced. A third specimen is of a rather pale castaneous, the polished space before the fascia is brownish, an oblique mark on each elytron, bounding the posterior edge of the pale fascia in velvety-black, and between these marks the surface is of the same colour as the base, the apical third is deeply infuscated, the metasternum, abdomen and parts of the legs are more lightly infuscated. A fourth specimen is like the third, except that the base of the elytra is paler than the prothorax, and that the under-surface is scarcely infuscated.

HOMOEMOTA TRICOLOR sp. nov.

Bright reddish-castaneous, scutellum somewhat darker; elytra with a conspicuous narrow pale reversed V, beyond this and the abdomen black, with a vague bluish or purplish gloss. With very short depressed pubescence, absent, except posteriorly, from elytra; a few short setae scattered about on upper-surface, and fairly dense on tibiae, basal half of antennae with some moderately long ones.

Head with small, dense, asperate punctures; face gently concave. Eyes deeply notched, upper portion thin. Antennae long and thin, considerably passing elytra, third joint almost twice the length of first, and much longer than fourth, fifth slightly longer than fourth, the others gradually decreasing in length. *Prothorax* distinctly longer than wide, sides gently and evenly rounded, base slightly narrower than apex; surface shagreened and with dense but rather shallow punctures. *Elytra* rather flat and thin, slightly wider than widest part of prothorax, almost parallel-sided to near apex; with coarse, crowded punctures, becoming sparser some little distance beyond the reversed V, and then much smaller but crowded about the apex. *Legs* long and thin; femora (especially the four hind ones) strongly pedunculate, hind pair passing elytra for more than half of the thickened portion; hind tibiae slightly curved. Length, 6.5-10 mm.

Hab. New South Wales: Dorrigo (H. J. Carter and W. Heron), Wollongong (A. M. Lea). Type, 19315.

In general appearance strikingly resembling the pale form of *Zoedia gracilipes*, but structurally close to the typical form of *Homocnota (basalis)*; from the latter species it differs, apart from colour, in having the prothorax longer, thinner and less narrowed to the base, the strong elytral punctures continued beyond the reversed V, the latter also with punctures, and not elevated above the surface, the subbasal elevations near the suture very feeble (they are less pronounced than on any other species of the genus), and the legs somewhat longer. The base of the elytra is somewhat paler than the prothorax. The pubescence on the apex of the elytra, and on the scutellum, is no denser than on the pronotum, but being white is very conspicuous on the darker background. The antennae are not spinose, but there appears to be a feeble remnant, invisible from most directions, of an apical spur on the third joint. The finer sculpture of the prothorax varies; on three of the five specimens under examination the punctures are very evident, but on the others the shagreening is rather coarse, and the individual punctures are scarcely evident; on the first three also there are three impunctate slightly elevated longitudinal lines, of which the middle one connects with similar but transverse lines at the base and apex, the sublateral lines are slightly wider and commence at the base, but terminate at the apical third; on the two other specimens the lines are but vaguely indicated. On each elytron commencing near the shoulder at the base, there is a narrow, semivitreous, pale line, that extends almost to the middle; at its apex on one specimen it is connected with a pale vitta that extends to the side, parallel with portion of the reversed V, but there is no indication, or scarcely so, of the vitta on any of the others.

TILLOMORPHA MEDIOFASCIATA sp. nov.

Plate ix, fig. 7.

Black, shining, appendages of a more or less dingy red, elytra with a rather narrow, submedian white fascia, touching sides but not suture. Upper-surface with a few thin, scattered, upright hairs.

Head with crowded punctures in front, becoming sparser towards base. Eyes rather large and deeply notched. Antennae moderately long, not extending to tips of elytra, first joint about as long as second and third combined, third slightly longer than fourth, and shorter than fifth, the others gradually decreasing in length, but eleventh slightly longer than tenth. *Prothorax* distinctly longer than wide, strongly convex, sides gently rounded, but towards base conspicuously narrowed, densely longitudinally strigose, except for a narrow space at apex, and a wider one at base. *Scutellum* small and opaque. *Elytra* at base much wider than base of prothorax, parallel-sided to near apex, widely depressed at basal third, and then convex; with a few small punctures. *Femora* stout, pedunculate, hind pair passing elytra for about half their length. Length, 4.5 mm.

Hab. Northern Queensland (Blackburn's collection), Cairns district (F. P. Dodd). Type, I.9312.

Rather narrower than *T. moestula*, and elytral markings and proportions of antennal joints different, but prothorax somewhat similarly striated. The two halves of the fascia are somewhat obliquely placed, and are narrowed as they approach the suture. From some directions each eye appears to be divided into two, and the connecting rows of facets are really very few in number. The antennae are slightly flattened towards the apex, so that while, from some directions, the joints slightly decrease in length, they also slightly increase in width. The prothorax from the sides appears to be strongly arched; its under-surface is transversely corrugated in front, and coarsely rugose with strong punctures elsewhere; the metasternum and abdomen are shining and almost impunctate. The elytra at first appear to be impunctate, but on close examination the hairs are seen to be set in small punctures.

TILLOMORPHA MIROGASTRA sp. nov.

Black, shining; antennae (tips infuscated) and legs (except greater portion of femora) castaneous. Upper-surface in places with black and silvery pubescence, and with a few suberect hairs scattered about.

Head with crowded but sharply defined punctures, becoming somewhat sparser towards base. Eyes large and deeply notched. Antennae rather long and thin, first joint slightly longer than second and third combined, fifth the length of first, and much longer than fourth, the others gradually decreasing in length, but eleventh slightly longer than tenth. *Prothorax* distinctly longer than wide, strongly convex, sides rounded to beyond the middle, and then strongly narrowed to base; with rather sparse and small punctures, except at base, where they are dense. *Scutellum* small and rugose. *Elytra* about twice the width of base of prothorax, parallel-sided (except for a slight incurvature at basal third) to near apex, depressed across basal third, within each shoulder and on suture near base; somewhat shagreened and with numerous distinct punctures on basal fourth, apical half shining and with sparse, shallow punctures. *Femora* strongly pedunculate, hind pair just passing elytra; tibiae (especially the hind pair) rather long. Length, 4.5-5 mm.

Hab. Lord Howe Island, six specimens obtained by beating foliage (A. M. Lea). Type, I.5453.

In size outlines and general appearance very close to *T. moestula*, but prothorax nonstrigose; the elytral clothing is much as on that species, but the silvery antemedian markings do not meet at the suture. The three apical joints of the antennae appear to be always infuscated, the basal joint and tips of the

others are also sometimes infuscated. The upper-surface, at a glance, appears to be glabrous, except for some patches of silvery pubescence, but there is really a median fascia, placed like a reversed wide V, of very short velvety black pubescence, behind this is a narrow silvery edging, and in front of it on each elytron the pubescence forms a curved silvery mark: the mark commences not far from the base, extends as a narrow, and sometimes almost golden, line, almost parallel with the suture, curves round at the dark fascia, and is then strongly triangularly dilated to the margin, its inner curved portion is filled with black pubescence as the fascia; the base of the prothorax and parts of the under-surface are also clothed with silvery pubescence. The prothorax is much less arched than in the preceding species, on the under-surface its apex is lightly corrugated, and elsewhere coarsely shagreened; the metasternum is shagreened, but towards the apex is somewhat shining, the abdomen also is shining. The abdomen of the male is remarkable, at first glance it appears to be composed of but two segments: the first a large one about the length of the metasternum, the second fairly long at the sides, and narrow at the middle, its tip with a dense fringe of long golden-red hairs; the end of the upper-surface of the abdomen is also clothed with similar hairs; the fringe as a result (when viewed from behind) appears to be almost circular, and to margin a cavity (containing the three other segments) that is also filled with golden-red hairs. The abdomen of the female is normal.

TILLOMORPHA MOESTULA White.

There are numerous specimens of this species in the Museum from Queensland (Cooktown, Cairns, Kuranda, Mackay, and the South Johnstone River), but with the exception of one specimen from Mackay they are all smaller (down to two lines) than the type (three lines). They all have the pronotum densely longitudinally striated, a character not mentioned in the original description.

PERIAPTODES Pasc.

Trans. Ent. Soc. Lond., iii (3rd Ser.), p. 282.

PERIAPTODES LICTOR Pasc.

L.c. p. 283, pl. xiv, fig. 3.

P. frater, v. d. Poll, Notes Leyd. Mus. ix (1887), p. 119.

A specimen taken at the Coen River by Mr. W. D. Dodd agrees well, except as to size and the scape, with the description and figure of *P. lictor*, and also with the description of *P. frater*; the former was described as from Dorey, the latter from Cape York and New Britain. The type of *frater* was 41 mm. in length, the

Coen River specimen is 28 mm., and the type of *P. lictor* still smaller—"12 lines"; but even greater differences in length than these are common in closely allied genera. The Coen River specimen has numerous transverse impressions on the hind part of the scape, but not in front, and possibly on the type of *lictor* the impressions were more or less concealed by the clothing.

PROTEMNEMUS Thomson.

Syst. Ceramb., p. 81. Pascoe, Trans. Ent. Soc. Lond., iii (3rd Ser.), p. 280.

This genus is very close to *Periaptodes*, from which it differs in the flat elytra, with abruptly vertical sides, about the summit of which are numerous small pointed tubercles.

PROTEMNEMUS TRIMACULATUS sp. nov.

Plate ix, fig. 8.

Black. Densely clothed with very short, depressed, greyish-brown pubescence; with scattered whitish setae, more numerous on the under-surface and legs than elsewhere, and often arising from small nude spots or feeble granules; with a velvety brown subtriangular patch of pubescence about scutellum, and an irregular patch of similar pubescence on each side of disc at about the apical third, each patch sharply bounded on its inner edge, but outwardly obscurely amalgamating with somewhat lighter pubescence on the vertical sides.

Head with feeble granules; with a narrow median line from lip to base. Antennae passing elytra from about the sixth joint, first joint transversely impressed posteriorly, and with numerous granules, third joint also granulate and much longer than first and second combined, fourth to tenth decreasing in length, eleventh much longer than tenth. *Prothorax* feebly transverse, at apex scarcely wider than head, sides strongly armed, with a small, nude, elongate-oval space in middle, a small subconical partially concealed tubercle near it on each side, and with several patches of small granules. *Scutellum* curvilinearly triangular, depressed along middle. *Elytra* much wider than prothorax, with a small acute spine on each shoulder and a larger one on each side of apex; a row of small tubercles or spines marking the summit of the lateral declivity on each elytron, commencing with the spine on each shoulder and ending at the subapical patch, a row of similar spines slightly below and parallel with the summit, and a few spines scattered irregularly on the disc; with rather dense but more or less concealed punctures. *Legs* long and thin. Length, 38 mm.

Hab. Queensland: Coen River (W. D. Dodd). Type (unique), 16765.

Readily distinguished from the three species described by Pascoe, in Longicornia Malayana (*P. scabrosus*, *P. lima*, and *P. pristis*) by the conspicuous, tri-

angular, velvety patch about the scutellum. Traversing the flat portion of the elytra of the type (which is probably a male) at about two-fifths from the base, there is a feebly elevated but distinct ridge, but as it is not quite symmetrical it may be an accidental feature, and for this reason it has not been shown in the figure.

MESOLITA SCUTELLATA sp. nov.

Dull reddish-brown, some parts almost black, legs and antennae reddish, in parts glossed with purple. Clothed with fine, depressed, brownish or greyish pubescence, but variegated with pale spots about the summit of the apical slope of elytra, under-surface mostly with a whitish pubescence, but with a conspicuous ochreous spot on each side of mesosternum and of metasternum, scutellum with dense ochreous pubescence; a few long hairs about mouth; tibiae and tarsi densely setose.

Head with small, dense, normally concealed punctures; with a narrow median line. Antennae thin, passing elytra, third joint almost as long as fourth and fifth combined, these subequal, the others gradually decreasing in length. *Prothorax* slightly longer than wide, moderately convex, sides gently rounded in middle, base and apex equal; punctures as on head. *Elytra* long and thin, at base no wider than base of prothorax, slightly dilated at apical third and then narrowed, with the apex of each produced in an acute spine; base strongly depressed and with coarse punctures; elsewhere with punctures as on head. *Legs* long; femora stout, hind ones passing elytra. Length, 7-9 mm.

Hab. Queensland: Mount Tambourine (R. Hodge and A. M. Lea). Type, 19310.

Structurally fairly close to *M. lincolata* Pasc., but with very different markings. The base of the head, base of elytra and parts of the sterna have the derm blackish, and on one specimen the pronotum is almost black, the tips of most of the antennal joints and the tarsi and tips of tibiae are infuscated. On the elytra of two, of the four, specimens before me there are vague remnants of pale pubescent markings about the base, but the only distinct markings consist of a semicircular row of spots, six or eight in number, crowning the apical slope; the clothing on the apical portion of the suture is also pale. The scutellum, owing to its clothing, is very conspicuous.

MESOLITA INTERRUPTA sp. nov.

Plate ix, fig. 10.

Reddish-brown; in places black or blackish, with a coppery gloss. Clothed with short, depressed, variegated pubescence.

Head with dense and small, partially concealed punctures; median line well defined on basal half, feeble in front. Antennae slightly passing elytra, first joint stout, third slightly longer than first and second combined, and considerably longer than fourth, the others gradually decreasing in length. *Prothorax* considerably longer than wide, sides rather lightly rounded in middle, base and apex equal and truncate; punctures as on head. *Elytra* at base no wider than base of prothorax, parallel-sided for a short distance, then slightly dilated to beyond the middle, and then narrowed to apex, where each has a conspicuous spine; base depressed and with rows of coarse punctures, elsewhere with punctures as on head. *Legs* short and stout; hind femora not passing third abdominal segment; tibiae slightly shorter than femora. Length, 4.5-5.5 mm.

Hab. Queensland: Bundaberg (Blackburn's collection). Type, L9309.

Differs from the species herein commented upon as *M. pascoei* (and which appears to be correctly identified) by its consistently smaller size, prothorax with pale longitudinal markings (due to a median zone of darker pubescence), and elytra with a postmedian dark band completely interrupting the longitudinal pale lines; the apical armature is also different: at the apex of each elytron the spine is shorter, and appears to be given off at one side (pl. ix, fig. 10), but on *M. pascoei* the spine is conspicuously longer, and appears as a continuation of each elytron (fig. 11). On this species and on *M. pascoei* the hind femora terminate some distance before the tips of the elytra, and it is doubtful if these species can be regarded as generically distinct from *Corestetha insularis*; they are certainly, despite the shortness of the legs, congeneric with *M. lincolata*, but *M. transversa* is the type of the genus; the eyes, including the paucity of the facets, are almost exactly as on *C. insularis*, but the elytra are less parallel-sided, and the markings and tips are different. There is a faint coppery gloss on the reddish parts, but it is very conspicuous on the dark parts; the latter comprise most of the head, most of the prothorax, a space across middle of elytra, and some smaller parts towards apex and about base, most of under-surface, and the femora, except at base and apex; parts of the antennae are usually lightly infuscated. The clothing on most of the upper-surface is rather pale, and more or less lineate in arrangement, but on the dark parts it is usually also dark, except that down the middle of the pronotum the pale pubescence forms lines, about eight in number. On the elytra the lines of pale pubescence are rather conspicuous, but about the middle there is a curved dark space that interrupts them all, between it and the apex there are also a few dark spots, appearing on some specimens as remnants of a circle or semicircle. On the under-surface the pubescence is sparser and uniformly distributed. The elytra are decidedly depressed at the base, but rather less so than on others of the genus, their alternate inter-

stices are really slightly elevated, but appear to be rather conspicuously so owing to their clothing. There are twelve specimens in the Museum, one of which was marked "*Mesolita* sp. n." by Mr. Blackburn.

MESOLITA EPHIPPIATA sp. nov.

Black, in places with a metallic greenish gloss; antennae and bases of femora reddish. Densely clothed with short, depressed, brownish pubescence, becoming whitish on head and most of under-surface and of legs, elytra with conspicuous pale markings; with numerous hairs on muzzle; tibiae, especially the hind pair, with dense setae.

Head with small, crowded, more or less concealed punctures; median line narrow, shining and well-defined throughout. Antennae long and thin, distinctly passing elytra, third joint about twice the length of first, and much longer than fourth, the others gradually decreasing in length, sixth about the length of first. *Prothorax* distinctly longer than wide, sides rather slightly rounded in middle, base and apex equal and truncate, near base a shallow transverse impression, becoming deeper and with a few large punctures on sides; punctures as dense as on head and less concealed. *Elytra* at extreme base scarcely the width of prothorax, from slightly before the middle somewhat inflated, and thence narrowed to apex, where, towards the outer side, each is produced into a short stout spine; punctures dense and very minute, but a few large ones about base. Four front legs moderately long, the hind ones very long, about one-third of the hind femora passing elytra. Length, 10-11.5 mm.

Hab. Queensland: Kuranda (F. P. Dodd and H. Hacker), Cairns (A. M. Lea). Type, I.9306.

Structurally fairly close to *M. lincolata*, but the elytra are narrower and even more depressed about the base, and the clothing is very different; the elytral markings are somewhat as described in *M. transversa*, but the fascia crowning the apical slope is very narrow, not wide as in the figure, and each elytron is armed with a short spine at the outer apex. The suture and tips of elytra are sometimes obscurely reddish, the tips of the antennae are sometimes infuscated. Most of the clothing on the elytra is of a dingy-brown, but about the base there is a conspicuous, bluish-white, saddle-like patch, interrupted near and running parallel with the suture, and there is a conspicuous narrow semi-circle of similar pubescence crowning the apical slope, and slightly enlarged at the suture; the scutellum is clothed with dark pubescence in the middle, but silvery at the sides. The side pieces of the mesosternum are visible from above as thin, silvery processes, at the base of the elytra.

MESOLITA MYRMECOPHILA sp. nov.

Plate ix, fig. 9.

Black, shining, in places with a greenish gloss; parts of antennae and of legs obscurely diluted with red. Clothed with short depressed dark pubescence, but with conspicuous snowy-white patches; muzzle antennae and legs with numerous hairs, moderately numerous on elytra, and sparse on prothorax.

Head with small, dense punctures, becoming very feeble about base; rather strongly depressed in middle, median line well-defined towards base, less defined in front. Eyes small, very narrow in middle. Antennae long and thin, passing elytra for a short distance, third joint lightly curved, much longer than first or fourth, the others gradually decreasing in length. *Prothorax* rather strongly convex, not much longer than greatest width, which is slightly in advance of the middle, apex slightly wider than base and both truncate; with small punctures, sparser in middle than elsewhere, sides densely strigose. *Scutellum* small and semicircular. *Elytra* with the basal third strongly depressed, narrow and with dense punctures; apical half strongly inflated, strongly convex and minutely punctate; tips obliquely truncated and unarmed. *Femora* stout, hind pair considerably passing elytra; hind tibiae about the length of elytra. Length, 4.75-5.75 mm.

Hab. Queensland: South Johnstone River, in nests of ants (H. W. Brown). Type, 1934.

Seven specimens were sent by Mr. Brown, mounted with some black ants of the genus *Polyrhachis*, and at first glance the beetle strikingly resembles the ant, although the parts when examined separately are seen to be very different. No other Australian longicorn has been recorded as occurring with ants, but there are some from South and Central America known to associate with ants. Mr. Brown, in answer to an enquiry, wrote: "Concerning that ant-like longicorn, it is always found in company with the ant it imitates, and I have taken it inside a dead leaf with several ants." In its shining black appearance it is very different from all others of the genus, but structurally it is fairly close to *M. inermis*. The head has a conspicuous metallic-green gloss; on some specimens the legs are almost entirely red. The snowy-white patches of pubescence on the upper-surface are: a strip across the apex of the prothorax, two small patches at the base, sometimes irregularly conjoined, the scutellum, and a fascia, touching neither the suture nor sides, across the elytra at about the apical third; there are also snowy patches at the sides of the mesosternum (from above its side-pieces appear as silvery processes at the sides of the elytra as in the preceding species), tips of the metasternum, and on the intercoxal process of abdomen.

Behind the scutellum there is a patch of pubescence that in some lights is brightly iridescent, but tipped with snowy-white, the patch is shaped somewhat as in *M. inermis*, and in *M. ephippiata*.

MESOLITA PASCOEI v. d. Poll.

Plate ix, fig. 11.

Two specimens, from New South Wales, identified in the Blackburn collection as *M. pascoei*, and two others (from Nowra) that agree with specimens in the Macleay Museum so identified, differ only from the original description in being slightly longer (6.5-8 mm.) than the type (6.0 mm.); a specimen that I cut out, together with a pupa, evidently of the same species, from a dead leaf of a tree fern, in the National Park, near Sydney, differs from these in being slightly longer (9.0 mm.), and the pale pubescence on the pronotum having a vaguely lineate appearance (a trace of this is to be seen on only one of the others). All five have but one conspicuous stripe of pale pubescence on each elytron, and this stripe is continuous from the base to near the apex, but other less conspicuous stripes are present.

The species of *Mesolita* excluding *M. transversa* which is unknown to me, may be thus tabulated:

- A. Elytra unarmed at apex.
 - a. Apical slope of elytra uniformly clothed with pale pubescence *inermis*
 - aa. Apical slope without pale pubescence *myrmecophila*
- AA. Elytra armed at apex.
 - B. Pale markings at summit of apical slope isolated from all others.
 - b. The markings consist of isolated spots obliquely placed *scutellata*
 - bb. The marking consists of a curved fascia *ephippiata*
 - BB. Pale markings not as in B.
 - C. Disc of pronotum with isolated spots of golden pubescence *lineolata*
 - CC. Disc without golden pubescence.
 - D. Longitudinal stripe of pale pubescence on each elytron, continuous from base almost to apical spine *pascoei*
 - DD. Stripe conspicuously interrupted just beyond middle *interrupta*

CORESTETHA.

This genus was proposed by Pascoe, as distinct from *Mesolita*, mainly on account of its comparatively short legs, but those of the typical and only species—*C. insularis*—are much as those of *M. pascoi* and *M. interrupta*, and it is doubtful if the genus can be maintained.

Explanation of Plate ix.

- Fig. 1. *Tripectenopus caecus* sp. nov.
Fig. 2. *Chlamydopsis ectatommae* Lea, apex of prothorax, as seen from behind.
Fig. 3. *Chelonarium australicum* sp. nov.
Fig. 4. *Lissotes kershawi* sp. nov., head.
Fig. 5. *Lissotes kershawi* sp. nov., head, as seen from the side.
Fig. 6. *Bebius cylindricus* sp. nov.
Fig. 7. *Tillomorpha mediofasciata* sp. nov.
Fig. 8. *Protennummus trimaculatus* sp. nov.
Fig. 9. *Mesolita myrmecophila* sp. nov.
Fig. 10. *Mesolita interrupta* sp. nov., tip of elytron.
Fig. 11. *Mesolita pascoi* v. d. Poll, tip of elytron.

NOTE.—It will be noticed that certain lines are set in different type from the rest of the text: this is due to the inability of the linotype machine used to set certain signs, such as diaereses and accented letters.—EDITOR.